Company Name:	New-Indy Catawba LLC	**Permit Writer:**	Katharine K. Buckner
Permit Number:	TV-2440-0005	**Date:**	DRAFT

DATE APPLICATION RECEIVED: January 9, 2013
DATE OF LAST INSPECTION: August 7, 2017 – no violations or issues were noted in the inspection report.

FACILITY DESCRIPTION

New-Indy Catawba LLC. operates an integrated pulp and paper mill located in Catawba, South Carolina. The original pulp mill was constructed in 1959 which included a woodyard area for the processing of raw material, a Kraft Mill to chemically process wood chips into pulp, a pulp dryer, a chemical recovery area to recycle process chemicals, a utilities area to generate steam and electricity, a waste treatment area and other operations.

In 1962, a paper machine (PM1) and a groundwood pulping process were added to the facility to facilitate the production of paper. New-Indy installed an additional paper machine (PM3) in 1968, as well as the expansion of the groundwood pulping process. A thermo-mechanical pulping (TMP) process was added to the facility in 1978. Eight years later (1986), the groundwood and thermo-mechanical pulping processes were eliminated, while a new paper machine (PM2) was installed to increase the production of paper. Also, in 1986, a new thermo-mechanical pulping process was added to replace the original thermo-mechanical pulp (TMP).

In 2003, the original Kraft pulping system and bleach plant were replaced with a state-of-the-art Kraft fiberline and bleaching system. In addition, PM3 was converted from newsprint to coated paper production, and TMP was also re-configured to support only coated paper production. Presently, the pulp and paper mill produces coated and uncoated paper, and market pulp. Raw furnish (logs and chips) for the virgin pulp is southern pine.

The New-Indy Catawba LLC pulp and paper mill is comprised of eight (8) distinct process areas, which include the following: the woodyard area, Kraft pulp mill area, the thermo-mechanical pulp (TMP) mill area, the paper mill area, the chemical recovery area, the utilities area, the waste treatment area, and the miscellaneous area.

New-Indy Catawba LLC has operated the Catawba Mill under the prior names Resolute FP US Inc., Abibow US Inc., and Bowater Coated Paper Division.

PROCESS DESCRIPTIONS

Unit ID 01 – Woodyard Area: Southern Pine logs and chips are received by the New-Indy facility at the woodyard. Logs are debarked, chipped, and screened prior to storage for use within the pulping processes. Likewise, wood chips received at the mill are screened, and processed as needed, prior to use within the pulping processes.

Applicable Regulations: Standard No. 4 – Opacity, PM
SC Reg. 61-62.6 Fugitive Particulate Matter

Unit ID 02 – Kraft Process - Kraft Pulp Mill: Pulp from the Kraft process is produced from "cooking" wood chips in a caustic solution at an elevated temperature and pressure. Flash steam may be used in the chip bin; therefore, emissions must be controlled as required by 40 CFR 63, Subpart S.

In 2003, under c/p-CO, New-Indy replaced the existing Fiber Line (Pulping System) with an entirely new one in order to comply with the Pulp and Paper Cluster Rule – 40 CFR 63, Subpart S (MACT S). This source is considered a new source under MACT S because it is a new pulping system constructed/reconstructed after December 17, 1993, in accordance with 63.440(c)(2).

Applicable Regulations: Standard No. 4 – Opacity
Standard No. 7
NSPS Subpart BB
NESHAP 63 Subpart S
CAM

Unit ID 03 – Kraft Process - Bleach Plant: Pulp from the Kraft Pulp Mill is bleached in the Bleach Plant. c/p-CP, issued October 31, 2001, allowed the construction of a new four-stage bleaching system which replaced the old system in its entirety.

c/p-DC, issued Nov. 18, 2011, granted permission to modify the method of operation and make physical modifications to parts of the Kraft Pulping process to incrementally increase the potential production of Kraft pulp by increasing the efficiency of the conversion of wood chips into usable Kraft pulp fiber. This project is considered a change in the method of operation at the Bleach Plant due to more lignin removal. New-Indy uses oxygen delignification for this purpose (remove lignin) and also produces bleached pulp. Bleaching chemicals used to remove lower level of residual lignin and color compounds more selectively are used at bleached mills. Changes due to this project were an increase in bleaching chemical demand and bleaching steam demand by 1,307 lb/hr. These increases allowed for an increase in lignin removal and increased pulp fiber processing from yield increase. The maximum pulp yield adjusted for bleach yield as a result of this project is 1752 air dried tons bleached pulp per day (ADTBPD).

Applicable Regulations: Standard No. 4 – Opacity
NESHAP 63 Subpart S

Unit ID 04 – Kraft Process – Chlorine Dioxide Plant: The Chlorine Dioxide Plant produces the bleaching chemical (ClO_2) used in the Bleach Plant (EU ID 03).

c/p-CJ, issued Jan. 31, 1997, allowed for the installation of a new 212,000-gallon ClO_2 tank, Tail Gas (white liquor or weak wash) Scrubber, and modification to the existing Vent (chilled water) Scrubber and Fan. The permit required daily ClO_2 production records, record scrubber pressure each shift, and maintenance inspections of new scrubber.

c/p-DC, issued Nov. 18, 2011, granted permission to modify the method of operation and make physical modifications to parts of the Kraft Pulping process to incrementally increase the potential production of Kraft pulp by increasing the efficiency of the conversion of wood chips into usable Kraft pulp fiber. This project involved the installation a new filtrate separation system and increased ClO_2 requirement. The maximum design capacity of the Chlorine Dioxide Generator increased from 33 to 40 tons ClO_2/day. An increase in ClO_2 (bleaching chemical) demand was required for increased lignin removal and for bleaching the incremental pulp production increase. The ClO_2 Generator was physically modified to allow increased ClO_2 Production. Monitoring parameters were not updated after completion of c/p-DC because modifications to ID's 03 and 04 were completed approximately one month after the No. 1 paper machine was shutdown due to economic conditions. Because of poor economic conditions, production rates for ID's 03 and 04 have been well below the production levels prior to the c/p-DC modifications. Since the production levels following the c/p-DC modifications have been lower, the ranges have not required updating.

Applicable Regulations: Standard No. 4 – Opacity

Unit ID 05 – TMP Process: Pulp from the TMP process is produced by feeding chips at an elevated temperature and

pressure through a disk refiner, which shears the chips into a fibrous mass. Pulp from the TMP process may be brightened using hydrogen peroxide, to finished product specifications. Pulp from the TMP process is also brightened using sodium hydrosulfite.

- The TMP Process was reconfigured under c/p-CT (2003). Four lines were reconfigured to produce either newsprint or lightweight coated pulp. Production increased to 368,650 air dried tons of pulp per year (ADTP).
- A new bleaching process using hydrogen peroxide was installed under c/p-CY (2005). TMP production increased to 384,900 air dried tons of pulp per year (ADTP) under c/p-CY.

Applicable Regulations: Standard No. 4 – Opacity
Standard No. 7

Unit ID 06 – Paper Mill: Coated and uncoated papers are produced in the paper mill area on three paper machines. Market pulp is produced on one pulp dryer. The pulp dryer is considered part of the paper mill area even though the dryer is physically located in the old Kraft mill.

- A steam heated Booster Oven was added to the dry-end of the Pulp Dryer [c/p-CL, 1999]. This allowed production to increase by 4000 ADTFP.
- The 19 Air Make-Up Units were converted from steam heat to natural gas [c/p-CM, 2000] and also propane [c/p-CM-R1, 2000]. These permits set synthetic minor limits for NOx. The initial permit limited the hours of operation to 5000 hr/yr, each. The revised c/p allowed the facility to track the fuel usage for compliance with the limits and included the limits on fuel use.
- c/p-CS converted No. 3 Paper Machine from newsprint to lightweight coated paper production using water-based coatings. Production from the No. 3 Paper Machine increased to 366,667 air dried tons of finished paper per year (ADTFP).
- A new wet end Starch System was installed under c/p-CW in 2002.
- c/p-CY increased production from the No. 3 Paper Machine to 382,917 air dried tons of finished paper per year (ADTFP).

Applicable Regulations: SC Reg. 61-62.1, Section II(E) (IDs 4610, 9900) - NOx
Standard No. 1 – Opacity, PM, SO_2
Standard No. 4 – Opacity, PM
Standard No. 5 (ID 2010)
Standard No. 7 (ID 4110)
NESHAP 63 Subpart JJJJ (IDs 2010, 4610)
NESHAP 63 Subpart DDDDD (ID 4130)
CAM – starch silos

Unit ID 07 – Chemical Recovery: The recovery furnaces (chemical recovery area), which are auxiliary to the Kraft process, burn the organics in black liquor extracted from the chips and recover cooking chemicals. The causticizing area utilizes the chemicals recovered by the recovery boilers after adding salt cake and provides the cooking chemicals for the Kraft process. The chemical recovery process also includes a lime kiln.

- The ESP on No. 2 Recovery Furnace was replaced in 1990 with a new ESP [c/p-CE].
- The installation of 400 ton/day No. 2 Lime Kiln [c/p-CI] in 1995 replaced the old Lime Regenerator [c/p-CF]. No. 2 Lime

Kiln was permitted to burn natural gas, propane, and No. 6 fuel oil. The old controls, consisting of cyclone and a baghouse, were replaced with an ESP. The lime kiln was modified under c/p-CR to fully meet the demands of the fiberline increases. CaO production increased to 465 tons/day.
- The No. 3 Recovery Furnace was modified under c/p-CQ (2003) to fully meet production demands. Black liquor solids production was increased. c/p-CX allowed the facility to modify the No. 3 Recovery Furnace so it could meet the permitted firing rate of 647,500 tons BLS/year, which was allowed under c/p-CQ. c/p-DA increased the No. 3 Recovery Furnace permitted capacity to 744,600 tons BLS/year.

Applicable Regulations:
SC Reg. 61-62.1, Section II(E) (IDs 2723, 5105)
Standard No. 4 – Opacity
Standard No. 7 (IDs 5105, 5110, 2723)
NSPS Subpart BB, Subpart Db (5105)
NESHAP 63 Subpart MM
CAM

Unit ID 08 – Utilities: Steam and electricity are produced for facility-wide use by two combination boilers and one power boiler. Two turbine generators are operated off a main steam header fed by steam by the power boiler, combination boilers and recovery boilers. The electricity generated is used internally or can be sold to the grid. The recovery furnaces and the TMP process also generate steam. LVHC and HVLC Collection systems are also part of the Utilities emission unit.

c/p-CN allowed the construction of a new LVHC system to replace the old system. The project included a new caustic scrubber.

Applicable Regulations:
Standard No. 1 – Opacity, PM, SO_2, testing
Standard No. 3
Standard No. 7
NSPS Subpart BB
NESHAP Subpart S
NESHAP 63 Subpart MM
NESHAP 63 Subpart DDDDD
CAM

Unit ID 09 – Waste Treatment: A waste treatment area receives wastewater and mill waste (solid waste) from the various areas of the facility previously mentioned. Wastewater undergoes biological treatment to remove the dissolved organic wastes prior to discharge into the receiving stream. Mill solid waste is deposited within an on-site landfill for disposal.

- A 180,000-gallon Condensate Collection Tank was installed in 1999 [c/p-CK] for MACT S compliance. Kraft pulping condensates are pumped to the WWTP for the hard-piped foul condensate system. Gaseous emissions from the tank are vented to the LVHC system.

- A steam stripper was added under c/p-CN to strip foul condensate. The existing "foul" tank was converted into the feed tank.

Applicable Regulations:
Standard No. 4 – Opacity

NSPS Subpart BB
NESHAP Subpart S
CAM

Unit ID 10 – Storage Tanks: This emission unit includes one tank that stores methanol.

Applicable Regulations: Standard No. 4 – Opacity
NSPS Subpart Kb

Unit ID 11 – Miscellaneous: This emission unit includes the on-site landfill, road activities, equipment leaks and cleaning material usage, and miscellaneous material usage.

Applicable Regulations: Standard No. 4 – Opacity
SC Reg. 61-62.6 Fugitive Particulate Matter

Unit ID 12 – HD Pulp Storage Tanks: This emission unit includes 12 tanks used to store pulp between the Kraft mill bleaching system and TMP and the paper mill.

Applicable Regulations: Standard No. 4 – Opacity

Exempt Sources List: Includes various equipment, including emergency generators and emergency engines.

Applicable Regulations: NSPS Subpart JJJJ and NESHAP Subpart ZZZZ - emergency engines

PERMITTING HISTORY

c/p-CF issued Sept. 28, 1989 is no longer valid. This permit was for the installation of a Lime Regenerator. The No. 2 Lime Kiln replaced this unit under c/p-CI.

c/p-CG issued May 15, 1992 is no longer valid. This permit allowed the installation of a countercurrent packed tower scrubber which replaced the old scrubber at the bleach plant. The entire bleach plant and controls were replaced in 2003 under c/p-CP.

c/p-CH was issued July 29, 1992 for the conversion of the No. 3 Recovery Boiler ESP (EU ID 07) East chamber from a wet to dry bottom. Response from the facility on March 21, 2014 was this project was never completed.

c/p-CU, issued April 8, 2002, was for the review of 5 diesel powered pumps at the Wastewater Treatment Plant (EU ID 09) installed between 1989 and 2001. The facility has stated in response to TV renewal questions (3/21/14) that the aerated stabilization basin pumps (2 pumps) and the tertiary treatment plant pumps (2 pumps) are no longer in service. ID 2903 is No. 1 Holding Pond, Pump No. 2 installed in 1999. It is a Caterpillar rated at 345 HP. However, in response to comments, dated 4/24/2015, all pumps in the waste water treatment area have been removed.

c/p-CV, issued June 10, 2002, was for the review of a diesel-powered pump in the wastewater treatment process (EU ID 09) installed in 1988. The 325 horsepower Cummins diesel-powered pump (No. 1 Holding Basin Pump No. 1) (Equipment No. 2902) allows increased transfer rates from No. 1 Holding Basin to No. 2 Holding Basin. This construction permit was a synthetic minor permit limiting the hours of operation to 7000 hr/yr on this pump. However, in response

to comments, dated 4/24/2015, all pumps in the waste water treatment area have been removed.

c/p-CZ, issued Oct. 26, 2005, allowed the replacement of M27-0 No.1 Green Liquor Clarifier Tank, M27-033, and M27-0045 with a new 470,000-gallon White Liquor Storage Tank. The new tank is part of ID 07. This construction permit also allowed for the conversion of M27-37 No. 2 White Liquor Storage tank to a swing tank capable of storing either green liquor or white liquor. Both tanks have been added to Equipment ID 2700. The 172,730-gallon No. 1 Green Liquor Clarifier has been removed from this equipment description.

c/p-DA, issued March 16, 2006, modified the Kraft pulping process and chemical recovery process to allow an increase in unbleached Kraft pulp production from an actual 1,458 tons of air-dried unbleached pulp per day (10% moisture basis, ADTUBP/day) or 532,170 ADTUBP/year to projected production level of 1,825 ADTUBP/day or 666,125 ADTUBP/yr. Also increased was total paper and market pulp production, bleached pulp production, black liquor firing rate from 1,613 tons/day to 2,040 tons/day, and lime production from 418 tons/day to 600 tons/day. Modifications to the No. 2 Lime Kiln were never completed. These requirements for the No. 2 Lime Kiln were not rolled into the TV OP.

c/p-DB, issued August 12, 2010, allowed the modification of the No. 2 Lime Kiln by adding Oxygen Enrichment System to improve the conversion efficiency of lime mud ($CaCO_3$) to lime product (CaO). The actual average lime production increased but not above the maximum potential production of 465 tons CaO per day.

c/p-DC, issued November 18, 2011, was for the optimization of the kappa number in which to increase Kraft pulp production in the oxygen delignification process and bleach plant rather than the digester. This permit has been rolled into this TV renewal.

c/p-DD, issued Dec 9, 2015, limited the use of the Power Boiler (TV ID 08, Equipment ID 2550) to meet the definition of "limited use boiler" under the Boiler MACT (40 CFR 63, Subpart DDDDD). The boiler has a federally enforceable Average Annual Capacity Factor of less than or equal to 10%. This permit has been rolled into this TV renewal.

c/p-DE, issued Jan 26, 2018, covered the installation of a 40-kW emergency generator at the wastewater outfall. A construction permit was needed since none of the requirements nor placeholder language from NSPS Subparts IIII, Subpart JJJJ, nor NESHAP ZZZZ were included in the Title V operating permit previous to this one.

PROJECT DESCRIPTION New-Indy has requested to renew its TV Operating Permit.

CHANGES SINCE LAST OP ISSUANCE

Requested changes:

Jan 25, 2019 – Administrative Amendment to change facility name from Resolute FP US Inc. to New-Indy Catawba LLC.
April 13, 2018 – Minor modification to include the 40-kW propane fired emergency generator permitted under c/p-DE.
July 2016 – Significant Modification to streamline the source testing from SC Standard No. 1 with that in NESHAP Subpart DDDDD. This request will be incorporated into this TV renewal.
February 2016 – Minor Modification to include construction permit c/p-DD into the TV.
September 2012 – Minor Modification to revise the NO_x offset condition 4.14 due to equipment not installed.
July 2012 – Administrative Amendment to incorporate PSD permit –DC and correct environmental contact's email address in the permit.
July 2012 – Administrative Amendment to change facility name from AbiBow to Resolute FP US Inc.
July 2012 – Administrative Amendment to remove equipment not installed and make corrections to equipment not

modified as permitted in c/p-DA.
May 2011 – Minor modification to incorporate c/p-DB into the permit
May 2011 – Significant Modification to remove NO_x SIP call condition from permit.
January 2011 – Administrative Amendment to change facility name from Bowater to AbiBow and update P. O. Box and FAX numbers.

CHANGES MADE DURING THIS RENEWAL

- Previous TV permits only went up to Emission Unit (EU) ID 10 in the Emission Unit Description table, but 11 individual emission units were present in the body of the permit. The previous Emission Unit 10 was labeled as "Miscellaneous" whereas it should have been "Storage Tanks", and ID 11 is the Miscellaneous. The Emission Unit Description Table in this renewal will be corrected to show EU ID 10 as Storage Tanks and EU ID 11 as Miscellaneous
- In all sources where No. 6 fuel oil is used, the limitation of sulfur content in the No. 6 fuel oil has been changed to 2.1% from 2.5%.
- Updated several visual inspection requirements from annual to semiannual to address the requirements in SC 61-62.70.6(a)(3) for IDs 01, 06, 07, 11, and 12.

Emission Unit ID 01

- Updated the process weight rate for this emission unit based on c/p-DA. The PWR changed to 593 tons/hr from 898.

Emission Unit ID 05

- The expired TV OP gave a limit of 456,300 ADTP/yr for the TMP process. This rate could not be verified in the permits. After discussing with the facility, the correct production limitation is 384,900 ADTP/yr based on construction permit -CY, which was the last construction permit issued that dealt with the TMP process.

Emission Unit ID 06

- Combined the Booster Oven with the Pulp Dryer. Booster Oven does not have any emissions; it is steam heated and uses same stack as Pulp Dryer.
- The Pulp Dryer did not have any requirements in the previous TV. Opacity and PM limits from Std. 4 were added.
- The opacity limit for the No. 2 Coater Dryer was corrected to 20% since the unit was installed in 1986.
- Air Makeup Units – removed the visual inspection requirements since these sources only burn natural gas or propane as fuel.

Emission Unit ID 07

- Equipment ID 2723 – corrected the control device ID for the No. 2 Lime Kiln from 2723S2 to 2723C.
- Removed SC Std 4 PM limitations from Equipment IDs 2505, 2510, 5110, 5105, and 2723. SC Std 4 was revised in 2014 and the PM limitations in Section III were removed.
- For the Lime Kiln, corrected the PM limit from NSPS BB when burning gaseous fossil fuel from 0.067 gr/dscf@10%O_2 to 0.066.
- Removed source testing requirement from:
    - TRS from No. 2 Recovery Furnace since this requirement has been removed from SC Std. 4 during the revisions in 2014 and since TRS CEMs are required and used in accordance with SC Std. 4.
    - TRS from No. 2 Smelt Dissolving Tank Furnace since this requirement has been removed from SC Std. 4 during the revisions in 2014. A scrubber is used to control emissions from the No. 2 Smelt Tank and continuous monitoring is required.
- The previous operating permit included a Beryllium limit on the No. 3 Recovery Furnace (see old condition FW.3).

This limitation actually applies to the No. 2 Lime Kiln. This correction was made in this renewal.

- In order for the No. 3 Recovery Furnace to not be subject to NSPS Subpart Db, a 10% annual capacity factor was assigned for fossil fuels.
- Rolled in requirements from c/p-DA.
- Source testing the Recovery Furnace #3 for NOx has been required every 2 years. This unit is required to operate a NOx CEMs. Based on this, at the facility's request, the testing frequency will be changed to every 4 years for NOx.

Emission Unit ID 08

- The No. 2 Combination Boiler ESP, Control Device ID CD-2610C2, will be changed at the facility's request to CD-3710C1.
- Control Device ID 2550C – Previously this control device ID was listed for the Power Boiler. However, upon inquiry with the facility there is no control device associated with the Power Boiler. The control device ID will be removed and replaced with "none".
- Rolled in construction permit-DD to limit the Power Boiler to limited use boiler as defined in the Boiler MACT. Source testing under Std. 1 has been waived as long as the Power Boiler complies with the Boiler MACT as a "limited use" boiler.
- On the Power Boiler, the original TV permit and the most recent expired TV permit indicate the maximum sulfur content of the No. 6 fuel oil used in the Power Boiler is 2.5%. The renewal application also indicates this. However, the emission calculations used a maximum sulfur content is 2.1%. When asked about this, the facility replied:

  > "The correct sulfur content for No. 6 fuel oil is a maximum of 2.1%. There is no clear permitting record regarding when the sulfur content was reduced. The Catawba Mill may have limited the sulfur content of No. 6 fuel oil to a maximum of 2.1% in 1980 when it began burning TRS gases in the combination boilers."

  So the No. 6 fuel oil sulfur content will be limited to 2.1% going forward. This sulfur content also demonstrates compliance with the new SO_2 emission limit from SC Standard No. 1. This sulfur content limit will also apply to the No. 6 oil used in Combination Boilers No.1 and 2.
- The reporting frequency for the COMs requirements in Standard No. 1 was changed from quarterly to semiannual to be consistent with the changes in Standard No. 1 in 2014.
- Streamlined the source testing and frequency required by Std 1 with MACT DDDDD (Boiler MACT) as long as these two Combination Boilers comply with the Boiler MACT.

Emission Unit ID 09

- The following equipment had been removed from the facility:

Equipment ID	Equipment Description	Installation Date/ Modification Date	Control Device ID	Emission Point ID
2902	No. 1 Holding Basin Pump No. 1: 325 hp Diesel Pump	1988	None	2902
2903	No. 1 Holding Basin Pump No. 2: 345 hp Diesel Pump	1999	None	2903
2904	Aerated Stabilization Basin Pump: 200 hp Diesel Pump	2001	None	2904
2905	Tertiary Treatment Plant Pump: 200 hp Diesel Pump	2001	None	2905

(NOTE: Equipment ID 2903 – size was corrected to 345 hp (Responses dated 3/21/14); Equipment ID 2902 – size was corrected to 325 hp (Responses dated 3/21/14)).

Emission Unit ID 10

- Storage Tanks – the size of the Methanol Tank (Equip ID: M10-223) was incorrectly indicated in the TV renewal application as 45,686 gallons. The correct size is 39,023 gallons.

Emission Unit ID 12

- This source was added to define the HD Pulp Storage Tanks since these are used to store pulp from Kraft Bleaching and TMP processes.

SOURCE TEST REQUIREMENTS

Source tests are required either by regulation or for demonstrating compliance with the applicable limit.

Source	Pollutant for which test required	Frequency	Required by
ID 02, Equipment ID 5250 - Knotting and Screening System	HAP	Every 5 years	40 CFR 63, Subpart S
ID 03, Equipment ID 5300 – Four Stage Bleaching System and Control Device ID 5300C – Bleach System Scrubber	HAP	Every 5 years	40 CFR 63, Subpart S
TV ID 06, Equipment ID 4130 – Hot Oil Heating System	HAP	None (work practice standards)	40 CFR 63, Subpart DDDDD
ID 07, Equipment ID 2505 – No. 2 Recovery Furnace	PM	Every 5 years	40 CFR 63, Subpart MM
ID 07, Equipment ID 5105 – No. 3 Recovery Furnace	PM	Every 2 years	Compliance demonstration for meeting Std. 7 limits
		Every 5 years	40 CFR 63, Subpart MM
	SO_2	Every 4 years	Compliance demonstration for meeting Std. 7 limits
	CO	Every 4 years	Compliance demonstration for meeting Std.7 and Std. 7 avoidance limits
	NOx	Every 4 years	Compliance demonstration for meeting Std. 7 and Std. 7.1 limits
ID 07, Equipment ID 5110 – No. 3 Smelt Dissolving	PM	Every 4 years	Compliance demonstration for meeting Std. 7 and NSPS Subpart BB limits

Tank		Every 5 years	40 CFR 63, Subpart MM
ID 07, Equipment ID 2723 – No. 2 Lime Kiln	PM	Every 2 years	Compliance demonstration for meeting Std. 7 and NSPS Subpart BB limits
		Every 5 years	40 CFR 63, Subpart MM
	SO_2, CO	Every 4 years	Compliance demonstration for meeting Std. 7 avoidance limits.
	NOx	Every 2 years	Compliance demonstration for meeting Std. 7 limits
ID 08, Equipment ID 2550 – Power Boiler	PM	Within 180 days of Department notification and every 2 years thereafter if this boiler is not maintained as a "Limited Use" boiler under 40 CFR 63, Subpart DDDDD	Compliance demonstration for meeting Std. 1 limits
ID 08, Equipment IDs 2605, 3605 – No. 1 and No. 2 Combination Boilers	PM	Every 2 years *Note: This requirement has been streamlined and testing will meet that of 40 CFR 63, Subpart DDDDD.*	Compliance demonstration for meeting Std. 1 limits *Note: This requirement has been streamlined and testing will meet that of 40 CFR 63, Subpart DDDDD*
	PM, HCl, Hg, CO	After 2 consecutive tests at ≤ 75% of emission limit, every 3 years; otherwise annual	40 CFR 63, Subpart DDDDD
ID 08, Equipment ID 5260 – LVHC Collection System	HAP	Every 5 years	40 CFR 63, Subpart S

SPECIAL CONDITIONS, MONITORING, LIMITS

- Emission Unit ID 07, No. 3 Recovery Furnace (5105) - This furnace burns natural gas or No. 6 fuel oil, in addition to the Black Liquor Solids. The #3 Recovery Furnace was originally installed in 1983 and so was not subject to Subpart Db. However, the modifications in 2003 included an increase in emissions making this unit subject to Subpart Db. A 10% annual capacity factor on fossil fuels limit is now being assigned so as not to trigger the requirements of this regulation. The facility has records to show that the annual capacity factor for combusting fossil fuels has never been exceeded.
- ID 08, Equipment IDs 2605, 3605 – No. 1 and No. 2 Combination Boilers – The source testing required under Std 1 will be deferred to the testing required by 40 CFR 63, Subpart DDDDD as specified in the NESHAP – Conditions section of this TV renewal.
- ID 08, Equipment ID 2550 – Power Boiler – This boiler complies with 40 CFR 63 Subpart DDDDD as a "limited use" boiler and so the biennial source test required by Std 1 will not be required as long as the status of this boiler is maintained as a "limited use" boiler in accordance with Subpart DDDDD. If this boiler fails to comply with Subpart DDDDD, then a source test will be required within 180 days of being notified by the Department to source test.

PERMIT SHIELD

A facility is granted a permit shield: 1) upon explicit request in the TV application and 2) addressing regulations in TV Application Form K. Of the regulations that were listed in the TV application Form K, those that BAQ disagrees with are listed in Condition G.1 of the TV permit, in addition to SC Reg. 61-62.5, Stds. 7 and 7.1, SC Reg. 61-62.61, Subpart M and 40 CFR 61, Subpart M. The facility will not receive a permit shield for any regulations not addressed in Form K.

Explanation for exceptions listed in Condition G.1:

- SC Regulation 61-62.3 broadly applies to all facilities. Action by the facility may be required at some future date. This regulation was listed as not applicable and so was listed as an exception to the permit shield.
- 40 CFR 50 – 59, 62, 65-67, 69-71, 73, 74, 76-95, 97, 98 are regulations that are not reviewed for applicability with respect to the Title V permit and so are not in the scope of a Title V permit review. Subparts 50, 70, 95, and 98 are non-delegated regulations are not shielded.
- 40 CFR 61, Subpart M, SC Regulation 61-62.61, Subpart M, and SC Regulation 61-86.1 deal with future actions that a facility may conduct wherein which these may or may not be applicable based on the specific action that the facility wished to undertake. So, it is not appropriate to shield from future actions a facility may conduct.

EMISSIONS

The maximum production rates shown in the table are informational unless limited by a specific permit condition.

Fuel Burning Installation, Incinerator, or Process Emission Source	Title V Emission Unit ID	Title V Equipment Number	Maximum Production Rate	Production Rate Units
Combination Boiler 1	8	2605		
Natural Gas			405.0	MM Btu/hr
No. 6 Fuel Oil			392.0	MM Btu/hr
Bark			392.0	MM Btu/hr
Tire-Derived Fuel (TDF)			1.5	tons/hr
Combination Boiler 2	8	3705		
Natural Gas			720.0	MM Btu/hr
No. 6 Fuel Oil			700.0	MM Btu/hr
Bark			498.0	MM Btu/hr
Tire-Derived Fuel (TDF)			1.5	tons/hr
Power Boiler	8	2550		
Natural Gas			375.0	MM Btu/hr
No. 6 Fuel Oil			342.0	MM Btu/hr
Evaporators and Steam Stripper	7 & 9	2405 & 9801	3,169.0	Ton BLS/Day
Recovery Furnace No. 2	7	2505		
No. 6 Fuel Oil			360.0	MM Btu/hr
Black Liquor Solids (BLS)			1,129.0	Ton BLS/Day
Recovery Furnace 3	7	5105		
Natural Gas			370.0	MM Btu/hr

Fuel Burning Installation, Incinerator, or Process Emission Source	Title V Emission Unit ID	Title V Equipment Number	Maximum Production Rate	Production Rate Units
No. 6 Fuel Oil			360.0	MM Btu/hr
Black Liquor Solids (BLS)			2,040.0	Ton BLS/Day
Paper Mill				
Paper Mill - Paper Machine 1/Coater	6	2000		
Coated Paper			470.8	ADTFP/Day
Natural Gas			48.0	MM Btu/hr
Propane			48.0	MM Btu/hr
Kerosene			48.0	MM Btu/hr
Paper Mill - Paper Machine 2/Coater	6	4600		
Coated Paper			716.8	ADTFP/Day
Natural Gas			64.0	MM Btu/hr
Propane			64.0	MM Btu/hr
Kerosene			64.0	MM Btu/hr
Paper Mill - Paper Machine 3/Coater	6	4100-4130		
Coated Paper			1,049.1	ADTFP/Day
Natural Gas			47.7	MM Btu/hr
Propane			47.7	MM Btu/hr
Kerosene			47.7	MM Btu/hr
Paper Mill - Pulp Dryer	6	2100		
Pulp			811.9	ADTFP/Day
Air Make-Up Units	6	9900		
Natural Gas			126.3	MM Btu
Propane			126.3	MM Btu/hr
Thermo Mechanical Pulping System	5	4400		
Pulp Total			1,054.5	ADTP/Day
TMP Bleaching System	5	4400		
Pulp Total			375.0	ADTP/Day
Chlorine Dioxide Plant	4	1790		
ClO_2			40.0	T ClO2/Day
Bleach Plant				
Bleached Pulp	3	5300	1,752.0	ADTP/Day
Kraft Pulp Mill				
Fiberline	2	5200-5250	1,825.0	ADTP/Day
Smelt Tank 2	7	2510	1129.0	Ton BLS/Day
Smelt Tank 3	7	5110	2040.0	Ton BLS/Day
Precipitator Mix Tanks	7	2400	3,169.0	Ton BLS/Day
Causticizing Area	7	2700	465	Ton CaO/Day
Lime Kiln 2	7	2723	465	Ton CaO/Day
Lime Slaker 2	7	2700	465	Ton CaO/Day
Woodyard	1	1300	3,445,000	tons/day

Emission factors were taken from the following sources for the Emission Units noted:
TV ID 01, Woodyard Area: EPA 450/3-77-010; PM-10 and PM-2.5 ratio based on AP-42, Appendix B-2, Table B.2.2 Category 6.

TV ID 02, Kraft Pulp Mill: NCASI Technical Bulletin Nos. 858 and 884, various tables using Median, Mean, or NOR-PLOT values.

TV ID 03, Bleach Plant: Median emission factors from NCASI Technical Bulletin No. 858, Table 2A. B) Emission factor from NCASI Technical Bulletin 884, Table 4.9. Emission factor for elemental chlorine free (ecf) bleaching from NCASI TB 858, page 21. Emission factor from Bowater stack test February 2004.

TV ID 04, Chlorine Dioxide Plant: Highest average emission factors from NCASI Technical Bulletin No. 677, ClO2 Generators with scrubbers at mills E, K and N.

TV ID 05, TMP Process: NCASI FPAC Study; Technical Bulletin No. 738, average factors for Mill RR.

TV ID 06, Paper Mill: NCASI Technical Bulletin No. 884, Table 8.1, median emission factors; AP-42 Ch.1; NCASI Technical Bulletin Nos. 650, 701, and 740.

TV ID 07, Chemical Recovery: NCASI Technical Bulletin Nos. 650, 677, 701, 849, 858, 884, and 1020, median emission factors; AP-42 Ch.1; Source Tests

TV ID 08, Utilities: AP-42 Ch.1; Source Tests; NCASI Technical Bulletin No. 650 maximum values; EPA-600/R-97-115, EPA-450/2-89-001.

TV ID 09, Waste Treatment: NCASI Technical Bulletin Nos. 849 and 858; 2004 TRI Wastewater calculation document.

TV ID 10, Storage Tanks: TANKS.

TV ID 11, Miscellaneous: Emission calculations for emissions from the Roads are based on AP-42, Chapters 13.2.1 and 13.2.2.

TV ID 12, HD Pulp Storage Tanks: NCASI Technical Bulletin Nos. 701 and 858.

Insignificant Activities List: NCASI Technical Bulletin No. 858; TANKS.

The emission rates below were taken from the facility calculations. Each source's emissions were verified. The facility wide emissions from New-Indy's calculations were generally higher and used in the table below.

FACILITY WIDE EMISSIONS		
Pollutant	**Uncontrolled Emissions**	**Controlled Emissions**
	TPY	**TPY**
PM	109,409.75	1,706.03
PM_{10}	76,653.65	1,160.21
$PM_{2.5}$	65,030.69	971.23
SO_2	24,132.83	22,673.86

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FACILITY WIDE EMISSIONS		
Pollutant	**Uncontrolled Emissions**	**Controlled Emissions**
	TPY	**TPY**
NOx	3,611.88	3,611.88
CO	3,612.12	3,578.73
VOCs	10,075.91	1,882.44
TRS (as TRS)	2,651.57	269.11
HAPs	6,767.48	1,088.30
Largest HAP - Methanol	6,391.56	876.61

PROJECT REGULATORY APPLICABILITY REVIEW			
Regulation	**Applicable**		**Comments**
	Yes	**No**	
Section II(E): Synthetic Minor	X		See details below:
The following sources have synthetic minor limitations: - ID 06, Equipment ID 4610 – the No. 2 Coater Dryer has a NOx synthetic minor limitation, < 40.0 tpy increase. Fuel use limitations and records are used for compliance. - ID 06, Equipment ID 9900 – the Air Make Up Units (19 units total) have NOx synthetic minor limitations, < 40.0 tpy increase, resulting from the conversion of these units from steam heated to natural gas/propane fired [c/p-CM]. Fuel use limits and records are used for compliance. - ID 07, Equipment ID 5105 – the No. 3 Recovery Furnace has SO_2 and CO synthetic minor limitations from c/p-CQ. Periodic source testing and Black Liquor Solids use limitations and records are used for compliance. - ID 07, Equipment ID 2723 - Installation of the No. 2 Lime Kiln [c/p-CI and -CR] set synthetic minor limits for all criteria pollutants, including beryllium.			
Section II(G): Conditional Major		X	This project is for the renewal of this facility's operating permit. The facility is a major source and will receive a Title V operating permit.
Standard 1: Fuel Burning Operations	X		IDs 06 and 08
Standard 1: Fuel Burning Operations discussion: ID 06: Equipment IDs 4120, 4130, and 9900 are indirect heating sources are subject to Std 1. These units are subject to the PM, SO_2 and Opacity standards. There are 7 sets of Air Makeup Units (9900). These are indicated by the number of units in the set and the million Btu/hr rating of each in the set. For example: 6 @ 5.46 means there are six makeup units, each rated at 5.46 million Btu/hr. The Infrared Dryer (4120) and Hot Oil Heating System (4130) can burn natural gas, propane, or kerosene. The Air Makeup Units burn either natural gas or propane (only the worst case total emissions are presented for these units).			

ID 06 Sources - SC Regulation 61-62.5, Standard No. 1

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Regulation	Applicable		Comments
	Yes	No	

ID	Opacity %	PM Allowable (0.6 lb/10^6 BTU) lb/hr	SO_2 Allowable 2.3 lb/10^6 BTU) lb/hr	Uncontrolled Emissions (lb/hr)		Controlled Emissions (lb/hr)		Monitoring
				PM	SO_2	PM	SO_2	
4120 – Infrared Dryer	20	13.56	51.98	NG - 0.17	0.014	0.17	0.014	VE, Fuel use
				Prop – 0.17	4.5E-03	0.17	4.5E-03	VE, Fuel use
				Kero – 0.55	1.19	0.55	1.19	VE, Fuel use
4130 – Hot Oil Heater	20	5.46	20.93	NG – 0.069	5.46E-03	0.069	5.46E-03	VE, Fuel use
				Prop – 0.07	1.81E-03	0.07	1.81E-03	VE, Fuel use
				Kero – 0.22	0.48	0.22	0.48	VE, Fuel use
9900 – Air Makeup Units	20	3 @ 5.304 – 3.18	12.2	0.98, total	7.58E-02, total	0.98, total	7.58E-02, total	No VE since only natural gas or propane is used as fuel, Fuel Use
		6 @ 5.46 – 3.28	12.56					
		2 @ 6.253 – 3.75	14.38					
		2 @ 7.02 – 4.21	16.15					
		7.28 – 4.37	16.74					
		4 @ 8.45 – 5.07	19.44					
		10.01 – 6.0	23.02					

NG = natural gas, Prop = propane, Kero = kerosene
VE = visual emission inspections

ID 08: The Power Boiler (ID 2550), No. 1 Combination Boiler (ID 2605), and No. 2 Combination Boiler (ID 3705) are subject to the Opacity, PM, and SO_2 emission limitations of this regulation. Each of these boilers is permitted to burn multiple fuels. Because the Combination Boilers each combust wood at a capacity greater than 100 million Btu/hr, a COMs is required. The Std. No. 1 source testing requirement for the two Combination Boilers has been streamlined with the Boiler MACT (40 CFR 63, Subpart DDDDD). So as long as the requirements of the Boiler MACT remain in effect, testing has been deferred to the Boiler MACT.

For the Power Boiler, a COMs is not required because it burns oil and gas and does not need an add-on control device to demonstrate compliance with the PM limit of this regulation (Sect. IV.A.1.b). Also, the Power Boiler received a 10% average annual capacity factor limit under the Boiler MACT to be considered a limited use boiler (c/p-DD). The Std. No. 1 source testing requirement for the Power Boiler has been streamlined with the Boiler MACT (40 CFR 63, Subpart DDDDD). So as long as the requirements of the Boiler MACT remain in effect, testing for Std 1 will not be required.

ID 08 Sources - SC Regulation 61-62.5, Standard No. 1						
ID	Opacity, %	PM Allowable (0.6 lb/10^6 BTU)	SO_2 Allowable 2.3 lb/10^6	Uncontrolled Emissions (lb/hr)	Controlled Emissions (lb/hr)	Monitoring

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Regulation	Applicable Yes	Applicable No	Comments

		lb/hr	BTU) lb/hr	PM	SO_2	PM	SO_2	
2550*	40	NG – 225	862.5	0.71	0.23	0.71	0.23	Fuel use
		No. 6 – 205.2	786.6	54.93	751.72	54.93	751.72	Fuel use, Sulfur content
2605	40	NG – 243	931.5	3.08	0.24	3.08	0.24	Fuel use
		No. 6 – 235.2	901.6	62.96	861.62	4.40	861.62	Fuel use, Sulfur content
		Wood – 235.2	901.6	6,827.46	9.8	74.87	9.8	Fuel Use, COMs
3705	40	NG - 432	1656	5.47	0.43	5.47	0.43	Fuel use
		No. 6 - 420	1610	112.43	1,538.6	7.85	1538.6	Fuel use, Sulfur content
		Wood – 298.8	1145.4	11,811.07	12.45	126.49	12.45	Fuel Use, COMs

NG = natural gas, No. 6 = No. 6 fuel oil
*The Power Boiler, ID 2550 is limited to 10% annual capacity factor for total of all fuels as a limited use boiler under the Boiler MACT.

NOT APPLICABLE:
ID 07: The Recovery Furnaces No. 2 and No. 3 are not subject to Std 1 because these units are direct fired sources versus indirect fired sources, which are covered by Std. 1.

Standard 2: Ambient Air Quality Standards	X		The Air Dispersion Analysis has demonstrated compliance with this Standard.
Standard 3: Waste Combustion/Reduction (state only)	X		ID 08, Equipment IDs 2605 and 3705

Standard 3: Waste Combustion/Reduction (state only) discussion:
ID 08: The two Combination Boilers are subject to Std. No. 3 due to specification used oil combustion and tire derived fuel (TDF). Metal limitations apply along with hydrogen chloride. The specification oil shall be analyzed annually for onsite generated used oil and each batch analyzed of purchased specification oil and submit annual reports.

The use of TDF is limited to 1.5 tons per hour, monitored hourly usage, analyzed and submit semiannual reports.

The combustion of TRS and HAP containing streams in the combination boilers is done so in accordance with state and federal regulations and is exempt from Std. No. 3 requirements based on Section I.J.1 and 3. The burning of black liquor in recovery furnaces is also exempt from Std. No. 3.

Standard 3.1: HMI Waste Incinerators		X	This facility does not have any medical waste incinerators.
Standard 4: Emissions from Process Industries	X		IDs 01, 02, 03, 04, 05, 06, 07, 09, 10, 11, 12

Standard 4: Emissions from Process Industries discussion:

The following sources at the facility are subject to this regulation.

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Regulation	Applicable		Comments
	Yes	No	

ID 01: Woodyard Area – originally installed in 1959, modified in 1985 and 1991.
Applicable are Sections VIII and IX - Opacity is less than or equal to 20%, PWR = 593 tons/hr for entire woodyard, and minimize fugitive emissions. The PM emission limit at this PWR is 71.02 lb/hr.

ID 02: Kraft Pulp Mill – the current Kraft fiber line was permitted in 2001, which replaced the previous equipment. Opacity of 20% from Section IX applies.
Not applicable - Section VIII because there are no PM emissions from this process. Section XI because process was installed after the effective date. This section applies to sources installed prior to the effective date.

ID 03: The Bleach Plant; ID 04: the Chlorine Dioxide Plant; ID 05: the TMP Process - are subject to opacity limitations only. There are no PM emissions from these sources.

ID 06: Paper Mill – The Paper Mill is comprised of sources subject to Standard No. 1 and Standard No. 4. The 3 Paper Machines, Rereeler and Trim Pulpers, Starch Silos, Slurry Tanks, Starch Cooker, Flash and Paste Tanks, Air Flotation Dryer, Pulp Dryer, and No. 1 and No. 2 Coater Dryers (direct heating sources) are subject to Std 4. The remaining equipment are indirect heating sources and subject to Std. 1 (IDs 4120, 4130, and 9900).

ID 07: Equipment IDs 2505, 2510, 5105, 5110, and 2723 do not have to source test since changes to Standard 4 in 6/2014 removed the PM limitations from Section III of this regulation for these sources.

The No. 2 and No. 3 Recovery Furnaces (2505 and 5105) are subject to 40% opacity. No. 2 and No.3 Smelt Dissolving Tanks (2510 and 5110) are subject to 20% opacity. The No. 2 Lime Kiln (2723) is subject to 20% opacity.

TRS limits of Section XI apply to the No. 2 Recovery Furnace (2505) and No. 2 Smelt Dissolving Tank (2510). The No. 3 Recovery Furnace (5105), No. 3 Smelt Dissolving Tank (5110), and the No. 2 Lime Kiln (2723) were installed prior the applicability date of September 24, 1976 so the TRS limitations do not apply to this equipment.

SC Regulation 61-62.5, Standard No. 4

ID	Opacity (%)	PM Allowable (lb/hr)	Process Weight Rate (tons/hr)	Uncontrolled PM Emissions (lb/hr)	Controlled PM Emissions (lb/hr)	Monitoring
01	20	76.2	898	24	n/a	Opacity - semiannual visual inspections; PM - None required because at maximum operating capacity the potential emissions from this process are not above the allowable limit assigned by the applicable regulation.
02	20	N/A	N/A	N/A	N/A	Not required – all of this equipment is controlled by the Combination Boilers. Opacity monitoring is required on these boilers using a COMs required by Std. 1.
03	20	N/A	N/A	N/A	N/A	Opacity – monitor scrubber parameters in accordance with MACT S.

PROJECT REGULATORY APPLICABILITY REVIEW

Regulation				Applicable		Comments
				Yes	No	
04	20	N/A	N/A	N/A	N/A	Opacity – monitor scrubber parameters in accordance with MACT S.
05	20	N/A	N/A	N/A	N/A	Not required - This equipment processes and/or stores TMP pulp and pulp liquors that have no potential visible emissions.
06	20 / 40	Various – see permit	Various – see permit	Starch Silos: 394.29 Total other equipment: 4.06	Starch Silos: 0.39 Total other equipment: 4.06	Opacity – semiannual visual inspections. PM – Starch Silos exhaust to a baghouse which is subject to CAM monitoring. The remaining sources potential emissions are not above the Std 4 allowable, so no monitoring required.
07	20 / 40	Various – see permit	Various – see permit	See calculation sheets	See calculation sheets	2515, 2520, 5115, 5120, 2700, 2701: Semiannual VE; 2702, 2703: Daily VE; 2752C: scrubber parameters, once per shift 2505, 2723: COMs in accordance with MACT MM 2510, 5110: continuously monitor scrubber parameters
09	20	N/A	N/A	N/A	N/A	Not required - Equipment process and stores pulping condensates that have no potential visible emissions
10	20	N/A	N/A	N/A	N/A	Not required - Tank contains methanol that has no potential visible emissions.
11	Fugitive	N/A	N/A	N/A	N/A	VE on semiannual basis.
12	20	N/A	N/A	N/A	N/A	VE on semiannual basis.

N/A = not applicable.

Standard 5: Volatile Organic Compounds	X		EU ID 06, Equipment ID 2010 was in existence at the time this regulation became effective and so is subject to this regulation. Under Part C., the No. 1 Coater Dryer is limited to 2.9 lb VOC/gal of coating. New-Indy complies with this limitation by using low solvent technology. Daily records shall be maintained.
Standard 5.2: Control of Oxides of Nitrogen		X	06, 07, and 08

Standard 5.2: Control of Oxides of Nitrogen discussion:

ID 06 – The Air Flotation Dryer (Equipment ID 4110), Infrared Dryer (Equipment ID 4120), No. 1 Coater Dryer (Equipment ID 2010) and No. 2 Coater Dryer (Equipment ID 4610) are not subject to this regulation because these units were installed prior to the effective date of this regulation, June 25, 2004 and the burners have not been replaced. The Hot Oil Heating System (Equipment ID 4130) and most of the Air Makeup Units (Equipment ID 9900) are not subject since these units are less than 10 Million Btu/hr, which is the exemption threshold for this regulation. One Air Makeup Unit is rated at 10.01 million Btu/hr, just over the exemption threshold. However, this unit is not subject to this regulation

PROJECT REGULATORY APPLICABILITY REVIEW			
Regulation	**Applicable**		**Comments**
	Yes	**No**	
since it was installed prior to the effective date of this regulation, June 25, 2004 and the burner has not been replaced. ID 07 – The No. 2 and No. 3 Recovery Furnaces and No. 2 Lime Kiln are not subject to this rule since both units were installed prior to the effective date of this regulation, June 25, 2004 and the burners have not been replaced. Also, Recovery Furnace No. 3 and No. 2 Lime Kiln have been through BACT determinations under c/ps-CQ, - CR, and –DA. ID 08 – Neither the Power Boiler nor the two Combination Boilers were installed after June 25, 2004 nor have the burners been replaced. Since the Power Boiler received a federally enforceable annual capacity factor of ≤ 10% to be a limited use boiler under Boiler MACT (40 CFR 63, Subpart DDDDD) under construction permit c/p-DD, this boiler is exempt from the requirements of this regulation (Section I.B.12). Additionally, this unit is subject to SC Reg. 61-62.96. Sources subject to this regulation are exempt from being subject to Std 5.2 (Section I.B.7.).			
Standard 7: Prevention of Significant Deterioration	X		See details below:
The following sources have PSD limits: • Air Flotation Dryer (ID 06, 4110) is limited to 0.0164 lb PM /million Btu/heat input from c/p-CS. The Air Flotation Dryer was newly installed during the project when the No. 3 Paper Machine was converted from newsprint to lightweight coated paper. The Air Flotation Dryer is equipped with a low NOx burner as a PSD NOx limitation. • No. 3 Recovery Furnace (ID 07, 5105) has PSD limits on PM, TRS, SO_2, CO, and NOx from its original installation in 1983. • c/p-CQ revised the PM and NOx PSD limits and added PM_{10} PSD limit on the No. 3 Recovery Furnace when it was modified to meet fiberline production demands and increase BLS. • The No. 3 Smelt Dissolving Tank (ID 07, 5110) has PSD limits for PM and TRS from its original construction in 1983. • The No. 2 Lime Kiln (ID 07, 2723) received PSD limits on PM/PM_{10} and NOx from c/p-CR when it was modified to meet fiberline production demands and increased CaO production. • c/p-CY allowed the TMP Process (ID 05, 4400) to be modified by the addition of a H_2O_2 bleaching process. Yearly production limit was used as the PSD limit. • c/p-DA, a PSD and Non-attainment NSR c/p, allowed the modification of the Kraft pulping process and chemical recovery process to allow an increase in unbleached Kraft pulp production. The additional pulp will be used to increase the production of finished coated paper and market pulp. The increase in pulp and paper production will involve increases in various support emission units and equipment. New PM/PM_{10}, SO_2, and NOx limits were established for the No. 3 Recovery Furnace. • c/p-DC modified the method of operation and made physical modifications to parts of the Kraft Pulping process in order to incrementally increase the potential production of Kraft pulp by increasing the efficiency of the conversion of wood chips into usable Kraft pulp fiber. ID 02 and 08, Equipment IDs 5210, 5240, 2400, 5100, 2605, 3705, 5260, 5260C. PSD BACT was determined to be the continued use of the existing LVHC System Casuistic Scrubber [CD-5260C] located ahead of the combination boilers in the LVHC Collection System, and the continued use of the sulfur capture capability of ash in biomass boilers when combusting TRS/HAP streams. SO_2 emission limits were set for the two Combination Boilers (ID 08, 2650, 3705).			
Standard 7(c): Ambient Air Increments	X		The Air Dispersion Analysis has demonstrated

PROJECT REGULATORY APPLICABILITY REVIEW			
Regulation	**Applicable**		**Comments**
	Yes	**No**	
			compliance with this Standard.
Standard 7.1: Standards for Non-Attainment Areas	X		EU ID 07, Equipment ID 5105
Standard 7.1: Standards for Non-Attainment Areas discussion: New-Indy became subject to Std. No. 7.1 for NOx with the project permitted under c/p-DA. The Kraft pulping process and chemical recovery process were modified to increase unbleached Kraft pulp production. The No. 3 Recovery Furnace and the No. 2 Lime Kiln had NOx emission limits set with respect to Std. No. 7.1. However, changes to the No. 2 Lime Kiln were never done so this limitation was deleted and the offsets from the original project were reduced.			
Standard 8: Toxic Air Pollutants (state only)	X		All toxic pollutants are exempt from modeling based on the Standard 8, Section I.D.2 MACT exemption (Residual Risk).
Regulation 61-62.6: Control of Fugitive Particulate Matter	X		The following sources at the facility are subject to this regulation: ID 01: minimize fugitive emissions. ID 11, 1100-Roads: minimize fugitive emissions
40 CFR 60 - NSPS and **Regulation 61-62.60:** SC Designated Facility Plan and NSPS	X	X	Not Applicable – D, Da, Dc, VVV Applicable – Db, Kb, BB, IIII, JJJJ
Subpart D, Standard of Performance for Fossil-Fuel-Fired Steam Generators – This regulation applies to fossil fuel fired steam generating units installed after Aug 17, 1971 and greater than 250 million BTU/hr. The Power Boiler (ID 2550), the two Combination Boilers (IDs 2605, 3705), and the No. 2 Recovery Furnace were all installed prior to 1971. There have been no modifications or reconstructions of these sources since construction; therefore, this regulation does not apply. In TV EU 06, the #1 Coater Dryer (Equipment ID 2010), #2 Coater Dryer (Equipment ID 4610), Air Flotation Dryer (Equipment ID 4110), Infrared Dryer (Equipment ID 4120), Hot Oil Heating System (Equipment ID 4130), and the nineteen (19) Air Makeup Units (all with Equipment ID 9900), are not subject to Subpart D since these sources are all less than 250 million Btu/hr. Subpart Da, Standards of Performance for Electric Utility Steam Generating Units – This regulation applies to electric utility steam generating units installed after September 18, 1978 and greater than 250 million BTU/hr. The Power Boiler (ID 2550), the two Combination Boilers (IDs 2605, 3705), and the #2 Recovery Furnace were all installed prior to 1971 and do not generate electricity for sale to the grid. There have been no modifications or reconstructions of these sources since construction; therefore, this regulation does not apply. In TV EU 06, the #1 Coater Dryer (Equipment ID 2010), #2 Coater Dryer (Equipment ID 4610), Air Flotation Dryer (Equipment ID 4110), Infrared Dryer (Equipment ID 4120), Hot Oil Heating System (Equipment ID 4130), and the nineteen (19) Air Makeup Units (all with Equipment ID 9900), are not subject to Subpart Da since these sources do not generate electricity and are all less than 250 million Btu/hr.			

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PROJECT REGULATORY APPLICABILITY REVIEW			
Regulation	**Applicable**		**Comments**
	Yes	**No**	

Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units –
This regulation applies to steam generating units constructed, reconstructed or modified after June 19, 1984 and are 100 million BTU/hr or greater. New-Indy's boilers were installed prior to 1984 and have not been modified. Although it burns No. 6 fuel oil, Subpart Db does not apply to the No. 2 Recovery Furnace because it was installed prior to 1984 and the unit has not been modified or reconstructed.

The No. 3 Recovery Furnace (ID 07, Equipment ID 5105) burns natural gas or No. 6 fuel oil, in addition to the Black Liquor Solids. The No. 3 Recovery Furnace was originally installed in 1983 and was not subject to Subpart Db. However, it was modified in 2003 which included an increase in emissions making this unit subject to Subpart Db. The facility is taking a 10% annual capacity factor on fossil fuels so as not to trigger the requirements of this regulation. The facility has records to show that the annual capacity factor for combusting fossil fuels has never been exceeded.

No. 3 Recovery Furnace (ID 07, Equipment ID 5105) - Annual capacity factor ≤ 10% for fossil fuels

In TV EU 06, the #1 Coater Dryer (Equipment ID 2010), #2 Coater Dryer (Equipment ID 4610), Air Flotation Dryer (Equipment ID 4110), Infrared Dryer (Equipment ID 4120), Hot Oil Heating System (Equipment ID 4130), and the nineteen (19) Air Makeup Units (all with Equipment ID 9900), are not subject to Subpart Db since these sources are all less than 100 million Btu/hr.

Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units –
ID 06, Hot Oil Heating System (Equipment ID 4130) – this unit would be subject to Subpart Dc as the definition of "steam generating unit" implies, which means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. However, the affected sources are those with a maximum design heat input capacity of 100 million Btu/hr or less, but greater than or equal to 10 million Btu/hr. This source has a maximum design heat input capacity of 9.1million Btu/hr. Therefore, this unit is not subject to Subpart Dc.

ID 06, Equipment ID 9900, 10.01 million Btu/hr Air Makeup Unit for No. 3 Paper Machine – this unit is not subject to Subpart Dc. Subpart Dc applies to steam generating units constructed, modified, or reconstructed after June 9, 1989 and has a maximum design heat input capacity of 100 million Btu/hr or less, but greater than or equal to 10 million Btu/hr. This Air Makeup Unit was modified in 2000 which converted it from a steam heated unit to one that combusts natural gas or propane. The definition of "steam generating unit" means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. The Air Makeup unit does not produce steam or heat water. It provides heated, replacement air to processes at the facility. Therefore, this unit is not subject to Subpart Dc. The remaining eighteen (18) Air Makeup Units (all with Equipment ID 9900) are not subject to Subpart Dc since these sources are all less than 10 million Btu/hr.

In TV EU 06, the #1Coater Dryer (Equipment ID 2010), #2 Coater Dryer (Equipment ID 4610), Air Flotation Dryer (Equipment ID 4110), and Infrared Dryer (Equipment ID 4120) are less than 100 million Btu/hr but greater than 10 million Btu/hr. These units are potentially subject to Subpart Dc. However, these sources are dryers and do not meet the definition of boiler or process heater.

Subpart Kb, Standards of Performance for VOL Storage Vessels for which Construction, Reconstruction, or Modification

PROJECT REGULATORY APPLICABILITY REVIEW			
Regulation	**Applicable**		**Comments**
	Yes	**No**	
Commenced After July 23, 2984 – ID 10: 39,023-gallon Methanol Storage Tank is subject to this regulation. This tank was installed after 7/23/84, is greater than 75m^3 (19,812.75 gallons) and less than 151m^3 and the methanol has a true vapor pressure greater than 15.0 kPa (provided by facility: at 80 degrees F, vapor pressure is 2.61 psia = 18 kPa). The facility shall keep records of dimension and capacity analysis and keep records of the VOL stored, time of storage and vapor pressure of material stored. Subpart BB, Standards of Performance for Kraft Pulp Mills – This regulation applies to digester systems, brown stock waster systems, multiple-effect evaporator systems, recovery furnaces, smelt dissolving tanks, lime kilns, and condensate stripper systems at Kraft pulp mills. Not applicable – Subpart BB excludes, from the definition of brown stock washer system, diffusion washers. New-Indy uses a diffusion washer. Therefore, since the equipment listed as part of Equipment ID 5230 in Unit ID 02 works together as a system it is not subject to NSPS BB. Also, the No. 2 Recovery Furnace and No. 2 Smelt Dissolving Tank were installed prior to the applicability date of Sept. 24, 1976, so NSPS BB does not apply to these sources. Applicable – The No. 3 Recovery Furnace, No. 3 Smelt Dissolving Tank, and No. 2 Lime Kiln were installed after the applicability date and are subject to NSPS BB. Subpart VVV, Standards of Performance for Polymeric Coating of Supporting Substrates Facilities – This regulation applies to the polymeric coating of supporting substrate facilities; the definition of which excludes from this regulation the coating of paper, etc. Therefore, this regulation does not apply to the three coating operations in ID 06. Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines – The two existing emergency engines, Emergency Fire Pump #2 (TV EU 08, Equipment ID 2907) and Emergency No. 2 Lime Kiln Auxiliary Drive (TV EU 07, Equipment ID 2908) were installed prior to the effective dates of this regulation. This regulation does not apply to these two emergency engines. Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines – The 40 kW Emergency Generator for the waste treatment plant outfall is subject to this regulation since it was permitted and installed in 2018.			
40 CFR 61 - NESHAP and **Regulation 61-62.61:** NESHAP		X	Not Applicable – This facility does not emit the pollutants subject to this standard: asbestos, coke oven emissions, radio nuclide, radon, or vinyl chloride. However, it does emit benzene, beryllium, arsenic, and mercury. But these emissions are not from the types of industries or sources or in the amounts that are covered by the Part 61 NESHAPs.
40 CFR 63 – MACT and Area Source Standards and **Regulation 61-62.63:** NESHAP For Source Categories	X		Applicable – Subparts S, MM, JJJJ, ZZZZ, DDDDD

PROJECT REGULATORY APPLICABILITY REVIEW			
Regulation	**Applicable**		**Comments**
	Yes	**No**	

Subpart S, NESHAPs from the Pulp and Paper Industry – Applicable

- IDs 02 and 03 are subject to Subpart S as new sources based on the installation date of this equipment.

- ID 05 is subject to Subpart S as an existing source. However, the bleaching systems associated with ID 05 are complying with VATIP (§63.440(d)(3)) and thus exempt from the requirements of MACT S since no chlorine or chlorinated compounds are used in these bleaching systems. Modifications to the TMP bleaching process in 2003 and 2005 were not considered reconstruction; 63.1-capital cost did not exceed 50% of cost to replace source.

- ID 07, Equipment IDs 2400 and 5100 – Modification to these two Multi-Effect Evaporators in 2006 (2400 only), and 2012 (2400 and 5100) were not considered reconstruction; 63.1-capital cost did not exceed 50% of cost to replace source.

These sources are subject as existing sources.

Subpart MM, NESHAPs for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills - Applicable

- ID 07, Equipment IDs 2505, 2510, 5105, 5110, and 2723 – These are all existing sources under this regulation. Although there have been some modifications, none have triggered reconstruction.

Subpart JJJJ (5J), NESHAPs: Paper and Other Web Coating - Applicable

- ID 06, Equipment ID 4100, Paper Machine No. 3 Coater System - Although No. 3 Paper Machine coats a paper web in the same general manner as No. 1 and No. 2 Paper Machines, EPA Region 4 has determined that No. 3 Paper Machine is not subject to Subpart JJJJJ. Coating is applied off machine for No. 1 and No. 2 Paper Machines, while No. 3 Paper Machine has an on-line coater. Paper is coated in the paper machine dryer sections without removing the paper reel from the machine (no rewind stand at the coater). The EPA indicates that on-machine coating is excluded by the definition of a *web coating line* (63.3310) which includes use of an unwind or feed station. On-line coating does not need an unwind station. Also, EPA indicates the in-machine coaters were included as part of the MACT floor for paper machines.

Subpart ZZZZ, NESHAPs for Stationary Reciprocating Internal Combustion Engines – Applicable

The Wastewater Outfall 40 kW Emergency Generator (TV EU 09, Equipment ID 2906), Emergency Diesel Fire Pump #2, 175 hp (TV EU 08, Equipment ID 2907), and Emergency No. 2 Lime Kiln Auxiliary Drive, 101 hp diesel fuel (TV EU 07, Equipment ID 2908) are subject to this regulation.

Subpart DDDDD, NEHSAPs for Major Sources: Industrial, Commercial, Institutional Boilers and Process Heaters – Applicable

- ID 08, Equipment ID 2550 - The Power Boiler is subject to this subpart as an existing source. C/p-DD permitted the Power Boiler as a limited-use boiler under the Boiler MACT. The limitation is an annual capacity factor limit of ≤ 10%, where the total of all fuels used during the month is divided by the maximum design capacity of the boiler. For the Power Boiler the maximum rated design capacity is for natural gas (375 million Btu/hr).

Company Name:	New-Indy Catawba LLC	**Permit Writer:**	Katharine K. Buckner
Permit Number:	TV-2440-0005	**Date:**	DRAFT

PROJECT REGULATORY APPLICABILITY REVIEW

Regulation	Applicable		Comments
	Yes	**No**	
• ID 08, Equipment IDs 2605 and 3705 – The combination boilers are subject to this MACT. • ID 06, Equipment ID 4130 – The Hot Oil Heating System is subject to this MACT. • In TV EU 06, the #1 Coater Dryer (Equipment ID 2010), #2 Coater Dryer (Equipment ID 4610), and Air Flotation Dryer (Equipment ID 4110) are not subject to Subpart DDDDD because these units are direct-fired process dryers where the combustion gases are in direct contact with the process material. • Infrared Dryer (Equipment ID 4120) is a process dryer which used radiant heat energy (infrared radiation) to dry the process material. • The nineteen (19) Air Makeup Units (all with Equipment ID 9900) are space heater that are not covered by this regulation.			
Regulation 61-62.68: Chemical Accident Prevention	X		(ID 04) This facility is subject to 112(r) requirements for ClO_2, because the chemical is manufactured on site and stored at quantities above the threshold limit.
Regulation 61-62.70: Title V	X		This project is for the renewal of the Title V operating permit.
Regulation 61-62.72: Acid Rain		X	As provided by the facility: "The boilers do not generate electricity for sale to the grid, therefore the acid rain provisions do not apply:"
Regulation 61-62.96: Nitrogen Oxides (NO_X) and Sulfur Dioxide (SO_2) Budget Trading Program	X		See details below:
The No. 1 Power Boiler (Emission Unit ID 08, Equipment ID 2550) is subject to the NOx monitoring requirements: • The facility has opted to use the low mass emissions (LME) excepted methodology specified in 40 CFR 75.19 in lieu of continuous emission monitoring systems (CEMS) for determining the hourly heat input and hourly NO_x mass emissions (applicable certification, notification, monitoring, record keeping and reporting requirements of §75.19 must be met.) • If any LME unit exceeds 50 tons of calculated cumulative NO_x emissions for the control period (Ozone Season-May through September) the unit shall be disqualified from using the LME excepted methodology, and the owner operator of the LME unit shall install and certify monitoring systems that meet the requirements of §75.11, §75.12, and §75.13 by December 31 of the calendar year following the year in which the unit exceeded 50 tons of NO_x. • An annual demonstration must be provided, using one of the allowable methodologies in §75.19(c), to show that the LME unit continues to emit no more than 50 tons of NO_x during the control period.			
Regulation 61-62.99: Nitrogen Oxides (NO_X) Budget Program Requirements for Stationary Sources Not In the Trading Program		X	This regulation applies to NOx emissions from Cement Manufacturing. This facility does not manufacture cement. It is a pulp and paper manufacturing facility.
40 CFR 64 - Compliance Assurance Monitoring (CAM)	X	X	CAM applies to various sources at this facility. See discussion below.
CAM does not apply to the following sources: • IDs 01, 05, 10, 11, and 12 – these sources do not use add on control devices.			

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PROJECT REGULATORY APPLICABILITY REVIEW			
Regulation	**Applicable**		**Comments**
	Yes	**No**	
• IDs 03 and 04 – although these sources do use a scrubber to control Cl_2 and ClO_2, there are no applicable limitations that apply to these pollutants. Plus, the uncontrolled rates are not greater than 100.0 tpy. • ID 02, except for TRS emissions, CAM does not apply to the operations here since this source is subject to a MACT proposed after 1990. • ID 06, except for the Starch Silos (9700), CAM does not apply to the rest of the equipment in this emissions unit since no add-on control devices are used. • ID 08, Power Boiler (2550) does not have an add-on control device and therefore is not subject. • Any remaining equipment not described below is not subject to CAM due to no add-on control devices or source is covered by a MACT standard. • ID 07 – No. 2 Recovery Furnace and No. 2 Smelt Dissolving Tanks have PM emissions greater than 100.0 tpy and have an add-on control device for PM control. However, there is no applicable PM limit for these two sources, so CAM does not apply. CAM applies to the following sources: • ID 02 uncontrolled TRS emissions are >100.0 tpy and controlled by a scrubber and the two Combination Boilers. • ID 06, Starch Silos (9700) uncontrolled PM emissions are >100.0 tpy and controlled by baghouses. • ID 07 – PM emissions from the No. 3 Recovery Furnaces, No. 3 Smelt Dissolving Tanks, No. 2 Lime Kiln, Slaker, Purchased and Reburned Lime Silos, and TRS emissions from the three Multi-Effect Evaporators are subject to CAM due to add-on controls are used to reduce >100.0 tpy emissions to less than 100.0 tpy for which there are applicable limits. The No. 3 Recovery Furnace is a large unit with the remaining equipment being other units. • ID 08 – The two Combination Boilers are subject due to >100.0 tpy PM uncontrolled emissions and add-on controls. These units are subject to CAM as large units. • ID 09 the Condensate Steam Stripper (9801) is subject to CAM for TRS emissions as another unit.			

PUBLIC NOTICE

This Title V Permit will undergo a 30-day public notice period and a 45-day EPA comment period in accordance with SC Regulation 61-62.1, Section II(N). The comment period was open from March 20, 2019 to April 18, 2019 and was placed on the BAQ website during that time period.

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.